UNITED STATES DEPARTMENT OF COMMERCE United States Patent and Trademark Office Address COMMISSIONER FOR PATENTS P. D. Bey 1450

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NOTICE OF ALLOWANCE AND FEE(S) DUE

7590 12/19/2008

JAMES D. LILES, REG. NO. 28,320 PORTER, WRIGHT, MORRIS & ARTHUR LLP 250 EAST FIFTH STREET, SUITE 2200 CINCINNATL. OH 45202 EXAMINER

LAU, HOI CHING

ART UNIT PAPER NUMBER

2612 DATE MAILED: 12/19/2008

 APPELICATION NO.
 FILING DATE
 FIRST NAMED INVENTOR
 ATTORNEY DOCKET NO.
 CONTRIBMATION NO.

 107537.76
 060602005
 Roger A. Adelman
 1377-001
 5169

 TITLE OF INVENTION: EFFICIENCY AUDIBLE ALARM

| APPLN. TYPE | SMALL ENTITY | ISSUE FEE DUE | PUBLICATION FEE DUE | PREV. PAID ISSUE FEE | TOTAL FEE(S) DUE | DATE DUE |
|----------------|--------------|---------------|---------------------|----------------------|------------------|------------|
| nonprovisional | YES | \$755 | \$300 | \$0 | \$1055 | 03/19/2009 |

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.

HOW TO REPLY TO THIS NOTICE:

I. Review the SMALL ENTITY status shown above.

If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:

A. If the status is the same, pay the TOTAL FEE(S) DUE shown above.

B. If the status above is to be removed, check box 5b on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and twice the amount of the ISSUE FEE shown above, or

If the SMALL ENTITY is shown as NO:

A. Pay TOTAL FEE(S) DUE shown above, or

B. If applicant claimed SMALL ENTITY status before, or is now claiming SMALL ENTITY status, check box 5a on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and 1/2 the ISSUE FEE shown above.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), to: Mail Mail Stop ISSUE FEE Commissioner for Patents P.O. Box 1450 Alexandria, Virginia 22313-1450

or Fax (571)-273-2885

| INSTRUCTIONS: This f appropriate. All further c indicated unless corrected maintenance fee notification | form should be used for orrespondence includir I below or directed oth ons. | or trang the | nsmitting the ISSU Patent, advance on in Block 1, by (a | | | | | hould be completed when correspondence address a trate "FEE ADDRESS" fo |
|---|--|---|--|--|---|---|---|--|
| CURRENT CORRESPONDE | NCE ADDRESS (Note: Use Bil 7590 12/19 | | any change of address) | pap | ers, Each additiona | d paper | g can only be used for ficate cannot be used for such as an assignmental tiling or transmission. | r domestic mailings of the or any other accompanying nt or formal drawing, mus |
| JAMES D. LILI PORTER, WRIG 250 EAST FIFTH | ES, REG. NO. 28 HT, MORRIS & A I STREET, SUITE | ,320 .RTH | | I he Stat add tran | Cer reby certify that th es Postal Service v ressed to the Mail smitted to the USP | tificate is Fee(vith sur I Stop TO (57 | e of Mailing or Trans s) Transmittal is being ficient postage for fir ISSUE FEE address I) 273-2885, on the d | mission g deposited with the United st class mail in an envelope above, or being facsimile ate indicated below. |
| CINCINNATI,, C |)H 45202 | | | | | | | (Depositor's name) |
| | | | | <u> </u> | | | | (Signature) |
| | | | | L | | | | (Date) |
| APPLICATION NO. | FILING DATE | | | FIRST NAMED INVENTOR | | ATTC | RNEY DOCKET NO. | CONFIRMATION NO. |
| 10/537,726 | 06/06/2005 | | | Roger A. Adelman | | | 1377-001 | 5169 |
| TITLE OF INVENTION: | EFFICIENCY AUDIB | LE AL | ARM | | | | | |
| APPLN. TYPE | SMALL ENTITY | IS | SUE FEE DUE | PUBLICATION FEE DUE | PREV. PAID ISSU | E FEE | TOTAL FEE(S) DUE | DATE DUE |
| nonprovisional | YES | | \$755 | \$300 | \$0 | | \$1055 | 03/19/2009 |
| EXAMI | NER | | ART UNIT | CLASS-SUBCLASS | 1 | | | |
| LAU, HOI | CHING | | 2612 | 340-384700 | J | | | |
| 1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.563). Change of correspondence address for Change of Correspondence Address form PIOSB/122) and Lanched. Fee Address' indication (or "Fee Address" Indication form PIOSB/147; and PIOSB/147; and PIOSB/147; and PIOSB/147; and PIOSB/147; AND ADDRESS PIOSB/147; AND ADD | | | Correspondence ation form e of a Customer | 2. For printing on the patent front page, list (1) the anness of up to 3 registered patent attorneys or agents OR, alternatively. (2) the name of a single firm fluxing as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is 3 listed, no name will be printed. | | | | |
| PLEASE NOTE: Unle recordation as set forth (A) NAME OF ASSIG | ss an assignee is ident in 37 CFR 3.11. Comp NEE | ified b | elow, no assignee of this form is NO | data will appear on the p T a substitute for filing an (B) RESIDENCE: (CITY | atent. If an assign assignment. 7 and STATE OR C | OUN" | TRY) | ocument has been filed for |
| | | catego | | o. Payment of Fee(s): (Plea | | | | |
| 4a. The following fee(s) ar Issue Fee | e submitteu: | | 44 | A check is enclosed. | ise iirsi reappiy ai | ny pre | lously paid issue fee | snown above) |
| Publication Fee (No small entity discount permitted) | | | ed) | Payment by credit card. Form PTO-2038 is attached. | | | | |
| Advance Order - # | of Copies | | | The Director is hereby overpayment, to Depo | authorized to char sit Account Number | ge the | required fee(s), any de (enclose a | ficiency, or credit any n extra copy of this form). |
| 5. Change in Entity Statu | | | | ☐ b. Applicant is no lon | ger claiming SMA | LLEN | ITTY status. See 37 Cl | FR 1.27(g)(2). |
| NOTE: The Issue Fee and interest as shown by the re | Publication Fee (if requords of the United Sta | ired) tes Pat | will not be accepte ent and Trademark | d from anyone other than to Office. | he applicant; a regi | stered | attorney or agent; or th | ne assignee or other party ir |
| Authorized Signature _ | | | | | Date | | | |
| Typed or printed name | | | | | Registration N | | | |
| This collection of informat an application. Confidentis submitting the completed this form and/or suggestion Box 1450, Alexandria, Vir Alexandria, Virginia 2231. | tion is required by 37 C ality is governed by 35 application form to the ns for reducing this bur rginia 22313-1450. DC 3-1450. | FR 1.3 U.S.C USPT den, sl NOT | 11. The informatis . 122 and 37 CFR O. Time will vary hould be sent to th SEND FEES OR | on is required to obtain or a 1.14. This collection is est depending upon the indive Chief Information Office COMPLETED FORMS To | retain a benefit by t timated to take 12 i ridual case. Any co er, U.S. Patent and D THIS ADDRESS | he pub minute ommen Trader S. SEN | lic which is to file (and is to complete, including its on the amount of the nark Office, U.S. Dep D TO: Commissioner | I by the USPTO to process ig gathering, preparing, and me you require to complete artment of Commerce, P.O. for Patents, P.O. Box 1450 |

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PTOL-85 (Rev. 08/07) Approved for use through 08/31/2010.



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NITED STATES DEPARTMENT OF COMMERCE United States Patent and Trademark Offic Address: COMMISSIONER FOR PATENTS

P O Box 1450 Alexandria, Virgima 22313-1450 www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. | |
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| 10/537,726 | 06/06/2005 | Roger A. Adelman | 1377-001 | 5169 | |
| 75 | 90 12/19/2008 | EXAMINER | | | |
| JAMES D. LILES, REG. NO. 28,320 | | | LAU, HOI CHING | | |
| PORTER, WRIGHT, MORRIS & ARTHUR LLP | | | ART UNIT | PAPER NUMBER | |
| 250 EAST FIFTH STREET, SUITE 2200 | | | 2612 | | |

CINCINNATI., OH 45202

DATE MAILED: 12/19/2008

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)

(application filed on or after May 29, 2000)

The Patent Term Adjustment to date is 0 day(s). If the issue fee is paid on the date that is three months after the mailing date of this notice and the patent issues on the Tuesday before the date that is 28 weeks (six and a half months) after the mailing date of this notice, the Patent Term Adjustment will be 0 day(s).

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (http://pair.uspto.gov).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 (571)-272-4200.

Application No. Applicant(s) 10/537,726 ADELMAN, ROGER A. Notice of Allowability Examiner Art Unit HOLC LAU 2612 -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS. This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308. 1. This communication is responsive to amendment filed on June 6, 2008. The allowed claim(s) is/are 1-16. 3. Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f). b) \(\subseteq \text{Some* c) \subseteq \text{None of the:} a) \square All 1. T Certified copies of the priority documents have been received. 2. Certified copies of the priority documents have been received in Application No. 3. Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)). * Certified copies not received: _____. Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application. THIS THREE-MONTH PERIOD IS NOT EXTENDABLE. A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient. CORRECTED DRAWINGS (as "replacement sheets") must be submitted. (a) Including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached 1) hereto or 2) to Paper No./Mail Date (b) including changes required by the attached Examiner's Amendment / Comment or in the Office action of Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d). 6. DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- 1. Notice of References Cited (PTO-892)
- 2. Notice of Draftperson's Patent Drawing Review (PTO-948)
- Information Disclosure Statements (PTO/SB/08).
- Paper No./Mail Date
- 4. T Examiner's Comment Regarding Requirement for Deposit of Biological Material
- 5. Notice of Informal Patent Application
- Interview Summary (PTO-413),
- Paper No./Mail Date 7.

 Examiner's Amendment/Comment
- 8. X Examiner's Statement of Reasons for Allowance

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| | |

Application/Control Number: 10/537,726

Art Unit: 2612

DETAILED ACTION

Claims 1-16 are allowed.

Response to Amendment

 The office acknowledges the changes made to the claims by applicant. The rejection of claims 1-16 under 35 U.S.C. 112 have been withdrawn.

Reasons For Allowance

3. The following is an examiner's statement of reasons for allowance:

With regards to independent claim 1, the prior art does not specifically disclose or suggest a sound generating device comprising: a plate interposed between a first and second acoustic chamber, the plate being capable of being vibrationally excited and operative to generate sound in the first and second acoustic chambers substantially only at a resonant frequency common to both the first and second chambers and/or harmonics of the resonant frequency, the sound in the first chamber having a phase difference from the sound in the second chamber; and a phase adjustment circuit for adjusting the relative phases of sound generated in the first and second chambers so as to emit sound into the environmental air at approximately the same phase

With regards to independent claim 16, the prior art does not specifically disclose or suggest a sound generating device comprising: a plate interposed between a first and second acoustic chamber, the plate being capable of being vibrationally excited and operative to generate sound in the first and second acoustic chambers substantially only at a resonant frequency common to both the first and second chambers and/or

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Art Unit: 2612

harmonics of the resonant frequency, the sound in the first chamber having a phase difference from the sound in the second chamber; at least one resonance stabilization circuit for stabilizing the resonating sound generated in the first and second chambers so as to maintain a resonant air column over a range of variably occurring conditions due to manufacturing, temperature, pressure and the like; and a phase adjustment circuit for adjusting the relative phases of sound generated in the first and second chambers so as to emit sound into the environmental air at approximately the same phase.

With regards to dependent claims 2-15, they are allowable based on the dependency of claim 1

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance"

Conclusion

- The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.
- a. Drzewiecki et al. (U.S. 5,662,136) "Acousto-Fluidic driver fro active control of turbofan engine noise"
- Any inquiry concerning this communication or earlier communications from the examiner should be directed to HOI C. LAU whose telephone number is (571)272-8547.
 The examiner can normally be reached on M- F 8:30am - 5:00pm.

Art Unit: 2612

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Benjamin C. Lee can be reached on (571)272-2963. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Hoi C Lau/ Examiner, Art Unit 2612

/Benjamin C. Lee/

Supervisory Patent Examiner, Art Unit 2612